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CLAIMS:

1. A hydroprocessing process, comprising:

contacting a feedstock, at hydroprocessing conditions, with a bulk multimetallic catalyst comprised of at least one Group VIII non-noble metal and at least two Group VIB metals and wherein the ratio of Group VIB metal to Group VIII non-noble metal is from about 10:1 to about 1:10.

2. The process of claim 1 wherein the Group VIII non-noble metal is selected from Ni and Co and the Group VIB metals are selected from Mo and W.

3. The process of claim 1 wherein two Group VIB metals are present as Mo and W and the ratio of Mo to W is about 9:1 to about 1:9.

4. The process of claim 1 wherein the bulk multimetallic is represented by the formula:

$$(X)_b (Mo)_c (W)_d O_z$$

wherein X is a Group VIII non-noble metal, and the molar ratio of b: (c+d) is 0.5/1 to 3/1.

5. The process of claim 3 wherein the molar ratio of b:(c+d) is 0.75/1 to 1.5/1.

6. The process of claim 3 wherein the molar ratio of c:d is >0.01/1.

7. The process of claim 1 further comprising the step of sulfiding a multimetallic oxide precursor in order to form the bulk multimetallic catalysts, wherein the precursor is essentially an amorphous material having a unique X-ray diffraction pattern showing crystalline peaks at d = 2.53 Angstroms and d = 1.70 Angstroms.

8. The process of claim 1 wherein the feedstock comprises at least one of naphtha, diesel, heavy gas oil, lube oil, and residuum virgin distillates.

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9. The process of claim 8 wherein the feedstock is naphtha boiling in the range of 25°C to 210°C, and the hydroprocessing conditions include a reaction temperature of 100°C to 370°C, a pressure of 10 Bar to 60 Bar, a space velocity of 0.5 to 10 V/V/Hr, and a hydrogen gas treat rate of 100 to 2,000 SCF/B.

10. The process of claim 8 wherein the feedstock is diesel boiling in the range of 170°C to 350°C, and the hydroprocessing conditions include a reaction temperature of 200°C to 400°C, a pressure of 15 Bar to 110 Bar, a space velocity of 0.5 V/V/Hr to 4 V/V/Hr, and a hydrogen gas treat rate of 500 SCF/B to 6,000 SCF/B.

11. The process of claim 8 wherein the feedstock is heavy gas oil boiling in the range of 325°C to 475°C, and wherein the hydroprocessing conditions include a reaction temperature of 260°C to 430°C, a pressure of 15 Bar to 170 Bar, a space velocity of 0.3 V/V/Hr to 2 V/V/Hr, and a hydrogen gas treat rate of 1,000 SCF/B to 6,000 SCF/B.

12. The process of claim 8 wherein the feedstock is a lubricating oil boiling in the range of 290°C to 550°C, and wherein the hydroprocessing conditions include a reaction temperature of 200°C to 450°C, a pressure of 6 Bar and 210 Bar, a space velocity of 0.2 V/V/Hr to 5 V/VHr, and a hydrogen gas treat rate of 100 SCF/B to 10,000 SCF/B.

13. The process of claim 8 wherein the feedstock is a residuum having a 10% to 50% boiling range of 575°C, and wherein the hydroprocessing conditions include a reaction temperature of 340°C to 450°C, a pressure of 65 Bar to 1100 Bar, a space velocity of 0.1 V/V/Hr to 1 V/V/Hr, and a hydrogen gas treat rate of 2,000 to 10,000 SCF/B.

14. The process of claim 1 wherein the bulk multimetallic catalyst is in the form of particles having a median diameter of at least 50 nm, a surface area of at least 10 m^2/gm, a pore volume ranging from 0.05 to 5 ml/g, and an absence of pores smaller than 1 nm.

15. The process of claim 14 wherein the bulk multimetallic catalyst particle has a core-shell structure.

16. The process of claim 1 further comprising forming a hydrotreated product.

17. The process of claim 16 further comprising contacting at least one of the feedstock and hydroprocessed product with a catalytically effective amount of a second catalyst under catalytic conversion conditions.

18. The process of claim 17 wherein the second catalyst is at least one of a hydroprocessing catalyst, a cracking catalyst, and an isomerization catalyst.

19. The process of claim 18 wherein the second catalyst is present in at least one of

(i) a first reaction zone or zones upstream of the bulk multimetallic catalyst;

(ii) a second reaction zone or zones containing the bulk multimetallic catalyst; and

(iii) a third reaction zone or zones downstream of the bulk multimetallic catalyst.

20. The process of claim 1 wherein the bulk multimetallic catalyst is a sulfided catalyst.